

AMENDMENTS TO THE CLAIMS

The current listing of the claims replaces all previous amendments and listings of the claims.

1. (Currently Amended) A method for the decontamination of oily cuttings, coming from ~~the drilling of~~ drilling oil wells, and ~~the contemporaneous~~ recovery of the an oily component, comprising ~~the following steps:~~

[[a.]] mixing [[of]] said cuttings with CO<sub>2</sub> in ~~the~~ a liquid state at a pressure ~~value~~ ranging from 45 to ~~80~~ 70 bar and a temperature corresponding to ~~the~~ a saturation value, with ~~dissolution of the~~ to dissolve an oily fraction of the ~~cutting~~ cuttings;

[[b.]] ~~removal of the liquid phase (solution)~~ removing a liquid phase including the CO<sub>2</sub> and the oily fraction from the ~~solid phase (cutting)~~ cuttings;

[[c.]] expansion and heating of the ~~solution leaving step (b), with the recovery of~~ liquid phase to recover the oily fraction discharged, and to recover the CO<sub>2</sub> in ~~vapour~~ a vapor phase;

[[d.]] cooling and condensation of the ~~process~~ CO<sub>2</sub> and its ~~recycling to step (a), after possible under-cooling in the vapor phase for use in a subsequent mixing with other cuttings.~~

2. (Currently Amended) The method according to claim 1, wherein ~~the mixing of the cuttings takes place at a pressure ranging from 45 to 70 bar, whereas the separation of the oily fraction is effected~~ occurs at a pressure ranging from 30 to 60 bar.

3. (Currently Amended) The method according to ~~claims 1 and 2~~ claim 1 or claim 2, wherein the mixing ~~step~~ of the cuttings and the separation ~~step~~ of the oily fraction take place at a temperature close to the saturation value of the liquid phase.

4. (Currently Amended) The method according to ~~any of the claims from 1 to 3~~ claim 1, wherein the cooling and condensation of the CO<sub>2</sub> in the vapor phase occurs after under-cooling ~~degree~~ of the liquid CO<sub>2</sub> ranges at a temperature ranging from 0 to 5° C.

5. (Currently Amended) The method according to ~~any of the claims from 1 to 4~~ claim 1, wherein the liquid CO<sub>2</sub> is fed to ~~the~~ an extraction vessel in a ratio from 2 to 20 times by weight with respect to the cuttings during the mixing of the cuttings with CO<sub>2</sub>.

6. (Currently Amended) The method according to ~~any of the claims from 1 to 5~~ claim 1, wherein ~~the moving of~~ the liquid CO<sub>2</sub> is ~~effected~~ moved using a volumetric pump situated between the an accumulation tank and the an extractor vessel during removal of the liquid phase from the cuttings.

7. (Currently Amended) The method according to ~~any of the previous claims~~ claim 1, wherein the oily ~~phase extracted~~ fraction is separated by the use of one or more separators on-line.

8. (Currently Amended) The method according to claim 7, wherein at least one of the ~~separation section consists of a single separator with~~ separators is configured to provide a cyclone effect.

9. (Currently Amended) The method according to claim 7, wherein ~~the separation section consists of the~~ at least one separator comprises two separators, the first with and one of the separators is configured to remove the CO<sub>2</sub> vapor by an inertial impact, the second with and another one of the separators is configured to remove the CO<sub>2</sub> vapor by a cyclone effect.

10. (Currently Amended) The method according to ~~claims 7-9~~ claim 7, wherein a filter ~~for separating the entrained~~ configured to separate liquid[,] from the CO<sub>2</sub> vapor is situated down-stream of at least one of the separation-section separators.